Circuit extends 8052 Basic's reach

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Intel's MCS Basic-52 can only address 48 kbytes of data memory. The interpreter assumes that the remaining 16-kbytes are memory-mapped I/O ports. The circuit in **Fig 1** uses five of these I/O ports to extend the addressing range to 16 Mbytes. The scheme incurs the additional overhead of addressing the individual latches through ports.

IC_1 buffers the bus. IC_2, IC_3, and IC_4 are the address latches for storing the addresses. IC_{5A} and IC_{5B} direct
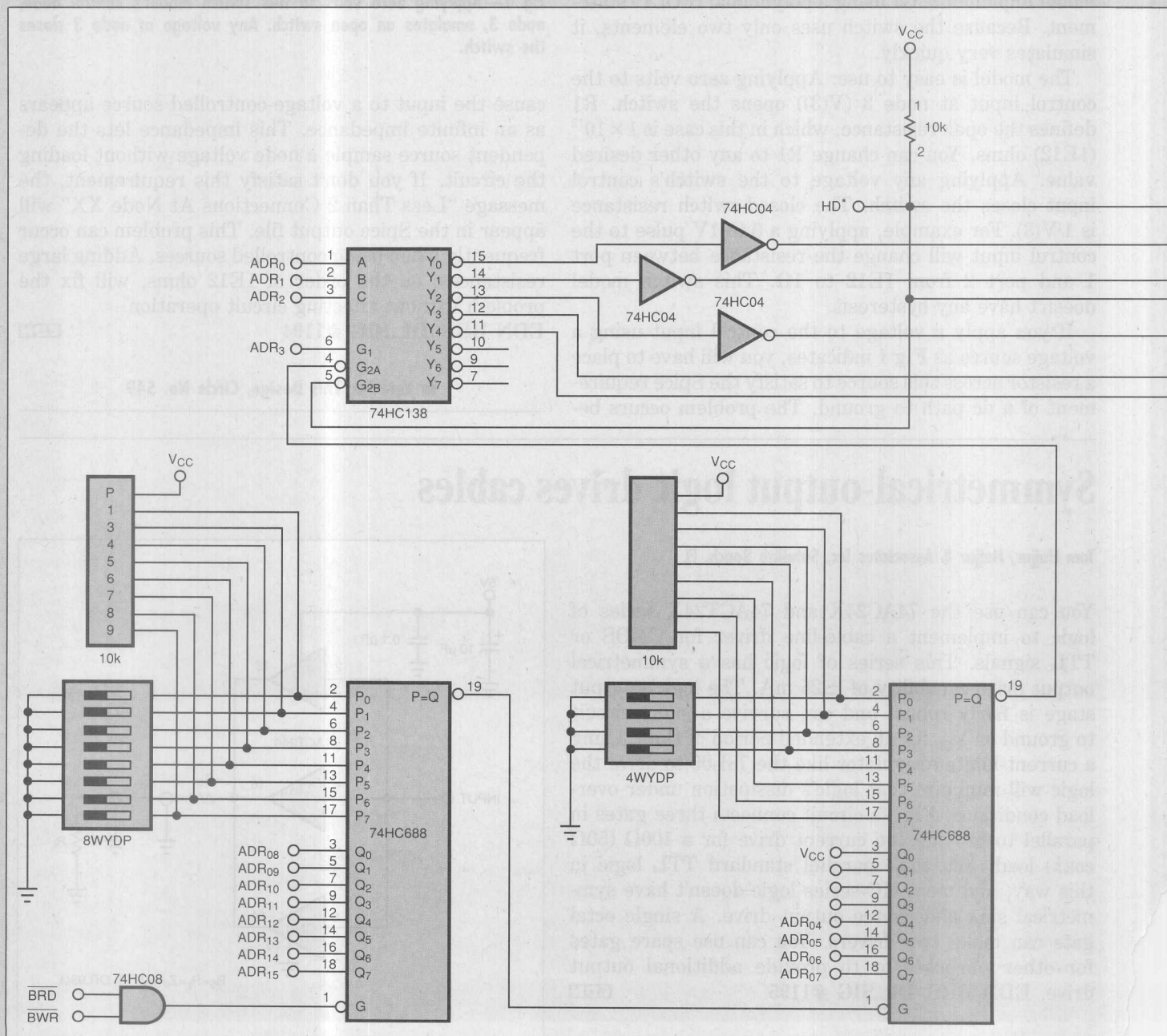

Fig 1—This circuit, along with some assembly-language routines you must write, will extend the data-address range of Intel's Basic-52 from 48 kbytes to 16 Mbytes.

the data for reads and writes. Model 74HC688s simplify port-address selection. Setting MC* disables the extended memory. Posted on the EDN BBS is a file containing **Fig 1** in OrCAD format.

You will need to extend Basic-52 keywords, using routines you must write in assembly language to access the expanded memory. **EDN BBS /DI_SIG #1182** EDN

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